

REMARKS

This application has been carefully reviewed in light of the Office Action dated September 17, 2008. Claims 20 to 23 have been newly added and are pending in the application, with Claims 1 to 19 having been cancelled without prejudice or disclaimer of subject matter and without conceding the correctness of the rejection applied against them. Claims 20 and 22 are the independent claims. Reconsideration and further examination are respectfully requested.

Claims 1 to 19 were rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 5,877,864 (Sumida). Reconsideration and withdrawal of this rejection are respectfully requested.

Claim 20 generally concerns output-processing of image data for respective pages. Page management records corresponding to respective pages of RAW image data are created from plural pages scanned by an image reader. In a respective one of the page management records, a first type of page data is generated for management of one page of the RAW image data, and a second type of page data is generated for management of image data generated by encoding the one page of the RAW image data. Respective output processes by a first output unit and a second output unit referring to the created page management records are managed.

According to one aspect set out in Claim 20, the first type of page data is deleted from the corresponding page management record in response to completion of the references by both the first and second output units to the first type of page data.

By virtue of this feature, it is ordinarily possible to reduce the memory capacity required for page management, since page data which is not used by the output units is deleted.

According to another aspect set out in Claim 20, it is determined whether or not image data resulting from encoding the RAW image data exists. If the resultant image data does not exist, the first output unit is controlled to output the RAW image data.

By virtue of this feature, it is ordinarily possible to reduce the time required for output of image data. In particular, the first output unit can start an output operation before the resultant image data is produced.

According to still another aspect set out in Claim 20, if the second output unit is not referring to the RAW image data of which the first output unit completes an output, the RAW image data is deleted.

By virtue of this feature, it is ordinarily possible to reduce the memory capacity required for maintaining image data, since the RAW image data which is no longer referred to is deleted.

Referring specifically to claim language, independent Claim 20 is directed to a data processing apparatus for output-processing image data for respective pages. The apparatus includes a page data management unit. The page data management unit is constructed to create page management records corresponding to respective pages of RAW image data from plural pages scanned by an image reader. The page data management unit is also constructed to generate a first type of page data for management for one page of the RAW image data and a second type of page data for management for image data generated by encoding the one page of the RAW image data, in the respective one of the page

management records. In addition, the page data management unit is constructed to manage respective output processes by a first output unit and a second output unit referring to the created page management records, and to delete the first type of page data from the corresponding page management record in response to completion of the references by both the first and second output units to the first type of page data. The apparatus also includes a control unit. The control unit is constructed to monitor completion of storing the RAW image data scanned by the image reader in a memory, to encode the RAW image data in response to the completion of storing, and to determine whether or not image data resulting from encoding the RAW image data exists. If the resultant image data does not exist, the control unit controls the first output unit to output the RAW image data. If the resultant image data does exist, the control unit decodes the resultant image data into RAW image data, and controls the first output unit to output the decoded RAW image data. In addition, if the second output unit is not referring to the RAW image data of which the first output unit completes an output, the control unit deletes the RAW image data of which the first output unit completes the output.

The applied art is not seen to disclose or suggest the features set out in Claim 20, and in particular is not seen to disclose or suggest at least the features of (i) deleting a first type of page data from a corresponding page management record in response to completion of references by both first and second output units to the first type of page data, (ii) outputting RAW image data if image data resulting from encoding the RAW image data does not exist, and (iii) deleting RAW image data of which the first output unit completes an output, if the second output unit is not referring to the RAW image data of which the first output unit completes an output.

As understood by Applicants, Sumida is directed to an image forming apparatus which stores image data of each page of an original document into a memory, and then outputs the image data to record the corresponding image on a recording medium. It is determined whether the memory will overflow if image data of the next page is stored in the memory, and if so, the reading of the image data of the next page is prohibited. See Sumida, Abstract.

However, Sumida is not seen to disclose or suggest plural output units referring to a common page management record, much less (i) deleting a first type of page data from a corresponding page management record in response to completion of references by both first and second output units to the first type of page data, (ii) outputting RAW image data if image data resulting from encoding the RAW image data does not exist, and (iii) deleting RAW image data of which the first output unit completes an output, if the second output unit is not referring to the RAW image data of which the first output unit completes an output.

Therefore, independent Claim 20 is believed to be in condition for allowance, and such action is respectfully requested.

Independent Claim 22 is directed to a data processing method for output-processing image data for respective pages. The method includes a page data management step. The page data management step includes at least the steps of creating page management records corresponding to respective pages of RAW image data from plural pages scanned by an image reader, generating a first type of page data for management for one page of the RAW image data and a second type of page data for management for image data generated by encoding the one page of the RAW image data,

in the respective one of the page management records, managing respective output processes by a first output step and a second output step referring to the created page management records, and deleting the first type of page data from the corresponding page management record in response to completion of the references by both the first and second output steps to the first type of page data. The method further includes a control step. The control step includes at least the steps of monitoring completion of storing the RAW image data scanned by the image reader in a memory, encoding the RAW image data in response to the completion of storing, and determining whether or not image data resulting from encoding the RAW image data exists. If the resultant image data does not exist, the control step controls the first output step to output the RAW image data. If the resultant image data does exist, the control step decodes the resultant image data into RAW image data, and controls the first output step to output the decoded RAW image data. If the second output step is not referring to the RAW image data of which the first output step completes an output, the control step deletes the RAW image data of which the first output step completes the output.

The applied art is not seen to disclose or suggest the features of Claim 22, and in particular is not seen to disclose or suggest (i) deleting a first type of page data from a corresponding page management record in response to completion of references by both first and second output steps to the first type of page data, (ii) outputting RAW image data if image data resulting from encoding the RAW image data does not exist, and (iii) deleting RAW image data of which the first output step completes an output, if the second output step is not referring to the RAW image data of which the first output step completes an output.

Therefore, independent Claim 22 is believed to be in condition for allowance, and such action is respectfully requested.

The other claims in the application are each dependent from the independent claims discussed above and are therefore believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the claims, however, the individual consideration of each on its own merits is respectfully requested.

Turning to a formal matter, the Office Action does not acknowledge Applicants' claim to foreign priority, or receipt of a certified copy of the priority document. A certified copy of the priority document was transmitted from the International Receiving Office and is available at the Patent Office's Image File Wrapper for this application. Therefore, Applicants respectfully request that the next Office communication acknowledge Applicants' claim to foreign priority and receipt of a certified copy of the priority document.

No other matters being raised, the entire application is believed to be in condition for allowance, and such action is courteously solicited.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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